



# 2018-2019 ANNUAL REPORT

Plain Language

INDEPENDENT ENVIRONMENTAL  
MONITORING AGENCY



A public watchdog for environmental management at EKATI DIAMOND MINE

Emery Paquin Vice-Chairperson

# Recommendations for 2018-19

## Recommendation No. 1

The Wek'eezhii Land and Water Board (WLWB) undertake a review to determine the most effective approach to determining the neutralization, acid drainage and metal leaching potential of waste rock.

## Recommendation No. 2

Dominion implement an adaptive management strategy for waste rock seepage including monitoring indicators, action benchmarks and response plans.



## Recommendations for 2018-19, continued

### Recommendation No. 3

Dominion investigate the possible source of mercury and increase non-lethal monitoring of lake trout in Kodiak Lake given the exceedance of Health Canada Guidelines for mercury in fish.

### Recommendation No. 4

Dominion increase efforts to document specific thresholds or triggers that cause the company to implement wildlife management measures (i.e. stop road traffic) and determine the effectiveness of such measures.

## Recommendations for 2018-19, continued

### Recommendation No. 5

Dominion better integrate the analysis of current caribou monitoring techniques (geo-fence collars, road traffic and incidental sightings, camera data) to better assess the effectiveness of current mitigation actions and improve on-site and range-wide management of caribou.

# Agency Activities

## Meetings and Visits

- 3 Board meetings
- AGM and Special Meeting of Society Members
- Lutsel K'e community career fair
- Community Public Information Sessions on mine closure (5)
- One day site visit to Ekati

## Management Plans and Studies

- Waste Rock and Ore Management Plan (WROMP)
- Interim Closure and Reclamation Plan (ICRP)
- Wastewater and Processed Kimberlite Management Plan (WPKMP)
- Wildlife Effects Monitoring Program Report
- Aquatic Effects Monitoring Program Report
- Dust Suppression Pilot Study Report
- Panda and Koala Deposition Study Report



# Wildlife

## Highlights

- 3,347 caribou observed including Beverly/Ahiak and Bathurst herds
- Grizzly bears observed on 145 occasions, including 37 sightings of family groups. Second highest number of sightings since 2001
- Mitigation actions (i.e. road closure or blasting deferral) undertaken on 20 occasions in response to proximity of caribou

## Agency Assessment

- ✓ WEMP report detailed waste management and wildlife incidents
- ✓ Grizzly bear population assessment scientifically rigorous and comprehensive
- X Camera report detailing caribou movement delayed by two years
- X Road traffic data incomplete
- X Management activity thresholds not linked to effectiveness



# Water and Fish

## Highlights

- Water License amended to increase the concentration of potassium allowed in the effluent
- Mercury and selenium in harvestable fish species reached levels of concern in several lakes downstream of the mine
- WLWB released new Guidelines for Aquatic Effects Monitoring Programs

## Agency Assessment

- ✓ Numerous AEMP Response Plans developed or updated
- X Increasing trends in mercury and selenium levels in fish in several lakes is concerning and indicates need for additional causal studies
- X Possible under-estimation of zooplankton diversity and density
- X Missed AEMP and SNP water sampling events





# Traditional Knowledge and Community Engagement

## Highlights

- Scope of the TK Elders Group expanded to include entire mine site
- Agency conducted five Community Information Sessions on mine closure

## Agency Assessment

- ✓ Long-standing TK and community programs continue to be funded
- X TK Elders Group largely inactive
- X Establishment of Culture camp delayed
- X Traditional and community knowledge not effectively incorporated into closure planning, especially closure of roads and WRSAs





# Air Quality

## Highlights

- No ambient air quality or dustfall standards or guidelines exceeded
- Monitoring confirmed EnviroKleen dust suppressant effective at reducing dust levels adjacent to roads
- Greenhouse gas emissions decreased by 2% from 2017

## Agency Assessment

- ✓ Continues to achieve GNWT standards and guidelines
- ✓ Monitoring program continues to be robust
- X Consolidation of site-wide air quality monitoring plan deferred



# Waste Rock Management

## Highlights

- Sable waste rock storage area (WRSA) redesigned to protect Ulu watershed
- Misery WRSA geotechnical investigation initiated
- 49 WRSA seeps sampled including 26 new (i.e. not previously sampled) and eight 'problematic' seeps

## Agency Assessment

- X Questions persist over use of 'total neutralization potential'
- X Misery geotechnical investigation limited in scope - only one 'relatively shallow' borehole drilled
- X Lack of certainty regarding seepage adaptive management



# Wastewater and Processed Kimberlite

## Highlights

- Fundamental change to the management of fine processed kimberlite (FPK)
- Panda and Koala open pits become the primary long-term deposit location for FPK replacing Long Lake Containment Facility and Beartooth pit
- Further research into acceptable Panda/Koala PKCA freshwater cap needed

## Agency Assessment

- ✓ Wastewater management processes are generally robust
- ✓ Discontinuation of discharges from LLCF positive for Koala watershed
- X Lack of source loading estimates, and water and energy balances
- X Uncertainty over depth of freshwater cap needed over FPK pit lakes





# Closure and Reclamation

## Highlights

- Financial security for mine closure was \$293 million (Dec 2018)
- Interim closure plan ver. 3.0 submitted for review
- Panda-Koala underground closed and decommissioned
- Closure of Old Camp location nearing completion

## Agency Assessment

- ✓ WLWB review of closure and reclamation continues to be strong
- ✓ Public review of updated Interim closure plan underway
- X Legal and administrative issues impede management of public liability and risk at mine closure



## Overall Performance of Regulators

Very Good

Wek'èezhìi Land and Water Board

Good

Government of the Northwest Territories - ENR and Lands

Satisfactory

Environment and Climate Change Canada

Not Satisfactory

Fisheries and Oceans Canada

Satisfactory

Canadian Indigenous Relations and Northern Affairs Canada



# Questions?

